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RISK OF NAUSEA AND VOMITING IN PATIENTS WITH LYMPHOMA UNDERGOING HIGH DOSE THERAPY WITH AUTOLOGOUS STEM CELL RESCUE

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Background: Despite the use of 5-HT3 antagonists and corticosteroids, control of nausea and vomiting (N/V) from high-dose therapy with autologous stem cell rescue (HDT) remains a clinical challenge. Routine antiemetic prophylaxis at Memorial Sloan-Kettering Center (MSKCC) for pts undergoing HDT is continuous infusion ondansetron and daily dexamethasone. Pts with lymphoma receiving HDT receive conditioning based upon either RT or chemotherapy; patients with regional disease may also receive hyperfractionated involved-field RT immediately prior to HDT. The objective of this study is to evaluate the incidence and predictors of nausea and vomiting in pts with lymphoma receiving HDT.

Methods: We performed a retrospective chart review of all sequential pts with lymphoma receiving HDT between 1/1/2004 and 12/31/2009 via chart abstraction, review of the pharmacy database and electronic medical record. Data collected include pt demographics, diagnosis and therapy, social history, preparative regimen, prophylactic and breakthrough antiemetic use, and instances of N/V. Vomiting was defined as recorded instances of vomiting, and nausea as recorded instances of nausea.

Results: 280 pts were eligible for analysis (Table 1). 54 (19%) received a TBI/TLI-based therapy, predominantly TLI with cyclophosphamide and etoposide, and 226 (81%) received chemotherapy-based therapy, predominantly BEAM (173/226, 77%); immediately prior to conditioning, 83 (30%) received an involved field RT boost to a site in the neck, chest, or abdomen. The incidence of N/V during the hospital stay for HDT was 85%, and during conditioning was 74%. 57% of patients had one or more episodes of vomiting. Women were more likely to experience N/V than men (94% vs. 80%, P< 0.001). Patients receiving TBI/TLI-based therapy had a greater incidence of N/V than did patients receiving chemotherapy preparative regimens (P< 0.01) and a longer duration of N/V (median days, 8 vs. 4). Pretransplant RT boost was associated with a trend towards a greater incidence of N/V (92% vs. 83%, P = 0.09).

Conclusion: In our single-institution experience, pts with lymphoma undergoing HDT frequently experience N/V during their hospitalization despite prophylaxis with ondansetron via continuous infusion and dexamethasone. Pts receiving RT-based conditioning or pre-transplant RT appear to be at greater risk yet of N/V. Additional research into anti-emetic prophylaxis in this patient population should be a high priority.

Table 1. Clinical characteristics of patients with lymphoma having received high-dose therapy with autologous stem cell rescue

	Total (N = 280)	Chemotherapy-based (N-226)	TBI- / TLI-based (N = 54)
Age, median (range)	52 (18-73)	54 (18-73)	33 (20-64)
Gender			
Male	171 (61%)	146 (65%)	25 (46%)
Female	109 (39%)	80 (35%)	29 (54%)
Diagnosis			
Classical Hodgkin lymphoma	80 (29%)	33 (15%)	47 (87%)
Diffuse large B-cell lymphoma	74 (26%)	72 (32%)	2 (4%)
Mantle cell lymphoma	59 (21%)	56 (25%)	3 (6%)
Follicular lymphoma	21 (8%)	21 (9%)	0
Peripheral T-cell lymphoma	13 (5%)	12 (5%)	1 (2%)
Angioimmunoblastic T-cell lymphoma	9 (3%)	9 (4%)	0
Anaplastic large-cell lymphoma	6 (2%)	6 (3%)	0
Primary CNS lymphoma	9 (3%)	9 (4%)	0
Other	9 (3%)	8 (4%)	1 (2%)

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BUILDING A LEGACY

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Working with children who have life threatening conditions too often leads to tragic endings. Being a Child Life Specialist (CCLS) on a pediatric bone marrow transplant unit involves legacy building and bereavement support for family and loved ones.

Historically, bereavement support at Duke Children's Hospital included, among many different things, hand/foot impressions using plaster. These impressions are best done on infants and toddlers (small hands). We were in need of a tool that we could use for school-age and adolescent patients.

Our program helped develop a different kind of hand/foot mold technique that is made with dental materials. In 2010, a grant was awarded to the child life specialist working in the pediatric bone marrow transplant unit to purchase these materials. This new technique allows for larger hand molds to be made (or multiple hands at once). Often times, an entire family may want to hold hands and have a mold made. The material called "alginate" is mixed with water to create a paste inside a large disposable cup or basin. The hand (or hands) is placed in the paste for approximately one minute or until it hardens and then the hand(s) is removed. Resin rock is then mixed and poured into the alginate impression. Within one hour, the resin rock is dry and the alginate can be peeled away. The child life specialist will then polish and wrap the molds for presentation to the family.

We have been able to use this technique for >30 children since 2010. The feedback given to our team has been overwhelming. Families have expressed how they can now hold their child's hand forever. Some have been eager to emboss the molds in gold. Others have simply been happy to have something to hold onto as they walk away from the hospital without their child.

Caring for the suffering and/or dying child is no easy journey. But with a team of caregivers working together to build a child's legacy, it can be done beautifully, honoring the child's precious life.

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ANXIETY IN BONE MARROW TRANSPLANT PATIENTS

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Purpose: Clinical observation has proven that anxiety disorders frequently appears in Bone Marrow transplant (BMT) patientes. It was decided to conduct a study within the psychological transplant preparation program (PTPP), where the pre-transplant anxiety level was measured.

Method: A standardized psychological test battery and a semi-structured interview were conducted on a group of 20 pediatric patients (5 females/ 15 males, between 6 -18 years old) during the first session prior to receiving any kind of PTPP. A record was kept: Age, gender, diagnostic date, hospital stay, clinical complications and family dynamic. Hypothesis testing was conducted so as to compare percentages, establishing a specificity level $f\tilde{N}$ of 0.5 and a power of 0.8; therefore, estimation according to the sample size, 20 patients, plus (less) 20% of losses during enrollment was done. Regarding central distribution measurements, hypothesis testing was conducted so as to compared means with paired ¡V T.

Based on the results, a therapeutic support plan is developed for handling the patient¡¦s anxiety.

Results: Out of the 20 patients assessed, 80% of the patients have a high anxiety level compared to their chronological age, according to what the anxiety scale evaluates. 70% of patients had the highest number of anxiety indicators within the tests. The statistical analysis showed that variables: a) clinical complications, b) hospital stay and c) family dynamics were the ones that had a 90% influence in patients anxiety. Secondly, age, gender and diagnostic date were factors that influenced the anxiety status in 64% of the cases.

Conclusion: It is concluded that the anxiety level in BMT patients is high from the moment they start the process, therefore, it is